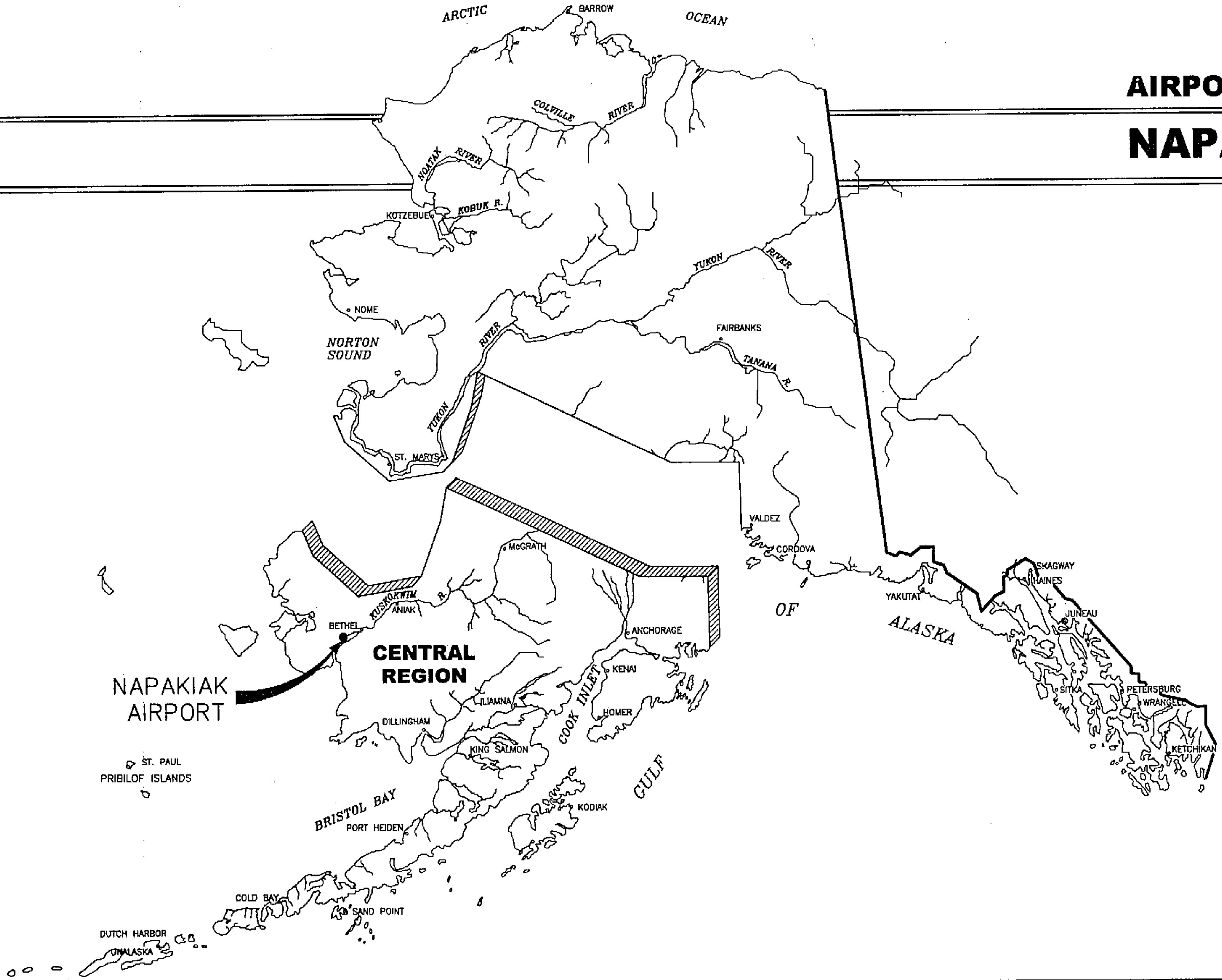


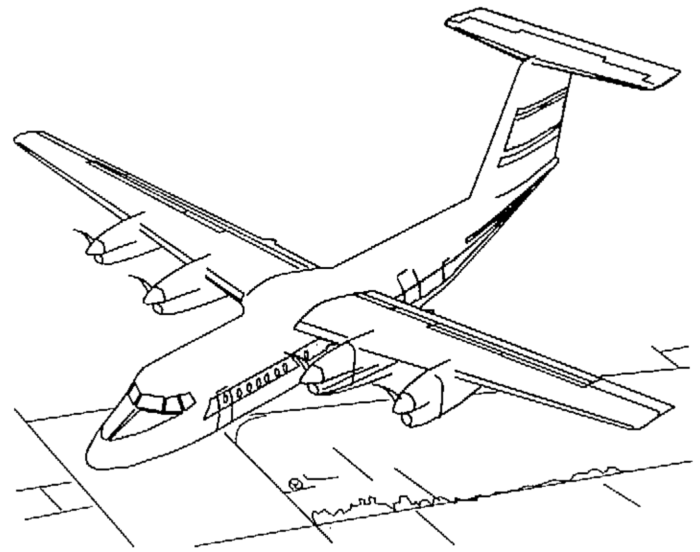
AIRPORT LAYOUT PLAN FOR

NAPAKIAK AIRPORT

2002

DRAWING INDEX

1 – COVER SHEET AND INDEX
2 – VICINITY MAP AND DATA TABLES
3 – PLAN AND PROFILE
4 – RUNWAY APPROACH SURFACES PLAN AND PROFILE
5 – F.A.R. PART 77 SURFACES
6 – PROPERTY PLAN
7 – NARRATIVE REPORT



SPONSORED BY
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
CENTRAL REGION

CONCUR Gordon C. Keith DATE 6/7/02
GORDON C. KEITH, PE — CONSTRUCTION & OPERATIONS DIRECTOR

APPROVED Steven R. Horn DATE 6/7/02
STEVEN R. HORN, P.E. — REGIONAL PRECONSTRUCTION ENGINEER

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 7/15/02
By: [signature] DATE: 7/15/02
FAA, AIRPORTS DIVISION
ALASKAN REGION, AAL-600

F.A.A. AIRSPACE REVIEW NUMBER:
97-AAL-069-NRA

NAPAKIAK AIRPORT
AIRPORT LAYOUT PLAN

SHEET 1 OF 7

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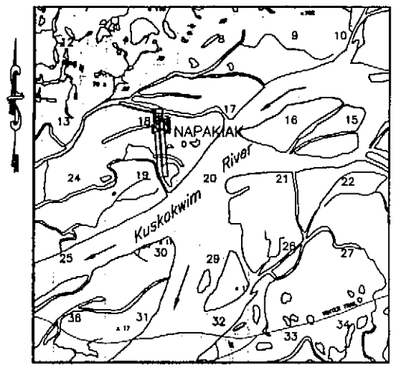


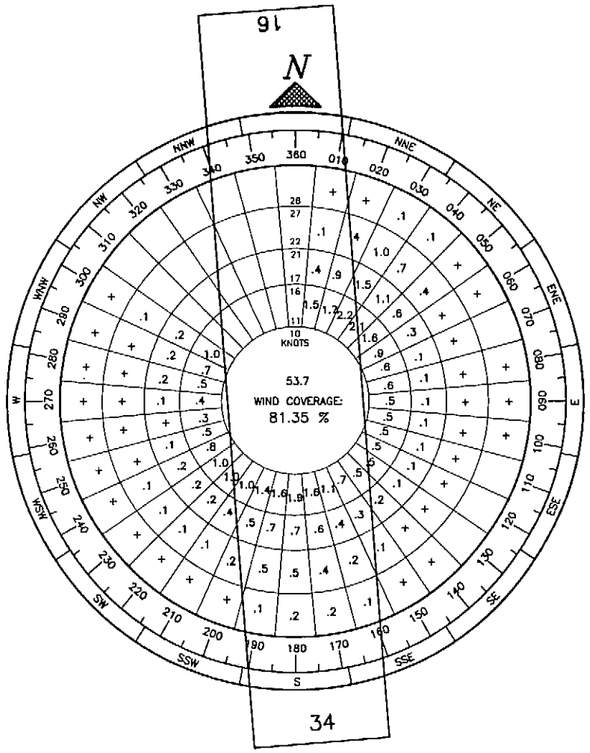
NOTE: CONTOUR ELEVATIONS ON THIS MAP ARE IN FEET.

VICINITY MAP

1:63,360
T 7 N, R 72 W, SEC. 18 & 19
SEWARD MERIDIAN
U.S.G.S. BETHEL (C-8), ALASKA

CONVERSION FACTORS FROM SI UNITS

TO CONVERT FROM	TO	MULTIPLY BY
STATION (1000 METERS (M))	FEET	3280.84
KILOMETER (KM)	MILE	0.6214
METER (M)	MILE	0.00062137
METER (M)	FOOT	3.28084
CENTIMETER (CM)	FOOT	0.0328084
CENTIMETER (CM)	INCH	0.3937008
SQUARE METER (M^2)	SQUARE FOOT	10.76391042
SQUARE METER (M^2)	SQUARE YARD	1.19599
SQUARE METER (M^2)	ACRE	0.00024711
CUBIC METER (M^3)	CUBIC FOOT	35.3146667
CUBIC METER (M^3)	CUBIC YARD	1.3079506
CUBIC METER (M^3)	GALLON (US LIQUID)	264.17204
CUBIC METER (M^3)	M. GAL.	0.26417204
KILOGRAM (KG)	POUND-MASS (LBF)	2.2046225
KILOGRAM (KG)	TON (SHORT)	0.00110231
NEWTON (N)	POUND-FORCE (LBF)	0.2248089
LUX (LX)	FOOTCANDLE	0.092903
DEGREE CELSIUS (°C)	DEGREE FAHRENHEIT	TF=(1.8 x TC)+32



WIND DATA

WIND COVERAGE: 10.5 KNOTS 81.35%
13.0 KNOTS 89.63%

SOURCE: WIND-CEILING-VISIBILITY DATA AT SELECTED AIRPORTS, VOLUME X, PART A, ALASKA AND PACIFIC REGIONS, JUNE 1981, U.S.D.O.T., F.A.A. DATA IS FOR BETHEL, ALASKA WHICH IS LOCATED 16 KILOMETERS NORTHEAST OF NAPAKIAK.

PERIOD: 1991-1996

MODIFICATIONS OF STANDARDS

ITEM	EXISTING	STANDARD	FUTURE
WIND COVERAGE (10.5 KNOTS)	81.35%	95.0%	81.35%
WIND COVERAGE (13.0 KNOTS)	89.63%	95.0%	89.63%
TAXIWAY WIDTH	12m [39']	7.5m [25']	12m [39']
TAXIWAY SAFETY AREA WIDTH	24m [79']	15m [49']	24m [79']

NOTES:
1. NO THRESHOLD SITING SURFAC OBJECT PENETRATIONS
2. NO OFZ OBJECT PENETRATIONS

BASIC DATA TABLE

RUNWAY DATA

ITEM			RUNWAY 17/35 EXISTING	RUNWAY 17/35 ULTIMATE
EFFECTIVE GRADIENT			0%	0%
% WIND COVERAGE			81.35%	81.35%
INSTRUMENT RUNWAY			N/A	N/A
RUNWAY SURFACE			GRAVEL	GRAVEL
PAVEMENT STRENGTH (LBS.)			N/A	N/A
APPROACH SURFACES			20:1	20:1
VISIBILITY MINIMUM			VISUAL	VISUAL
RUNWAY LIGHTING			M.I.	M.I.
RUNWAY MARKING			NONE	NONE
NAVIGATION AIDS			NONE	~~NONE~~ PAPI
RUNWAY SAFETY AREA DIMENSION			36m x 1134m [118' x 3,720']	36m x 1134m [118' x 3,720']
RUNWAY DIMENSION			18m x 990m [59' x 3,248']	18m x 990m [59' x 3,248']
RUNWAY OBJECT FREE AREA			120m x 1134m [394' x 3,720']	120m x 1134m [394' x 3,720']
RUNWAY OBSTACLE FREE ZONE			120m x 1110m [394' x 3,642']	120m x 1110m [394' x 3,642']
MAXIMUM GRADE			0%	0%
N.A.D. 1983	R/W 16 THRESHOLD	LAT.	60° 41' 41.1"	60° 41' 41.1"
		LONG.	161° 58' 45.0"	161° 58' 45.0"
	R/W 34 THRESHOLD	LAT.	60° 41' 09.2"	60° 41' 09.2"
		LONG.	161° 58' 40.1"	161° 58' 40.1"

BASIC DATA TABLE

AIRPORT DATA

ITEM		EXISTING	ULTIMATE
AIRPORT ELEVATION (M.S.L.) (METERS)		6.75m [22']	6.75m [22']
AIRPORT REFERENCE POINT (A.R.P.), N.A.D. 1983	LAT.	60° 41' 25.2"	60° 41' 25.2"
	LONG.	161° 58' 42.0"	161° 58' 42.0"
TAXIWAY LIGHTING		M.I.	M.I.
RAMP LIGHTING		FLOOD	FLOOD
MEAN MAX. TEMPERATURE, HOTTEST MONTH (°C)		15.6° C	15.6° C
MAGNETIC DECLINATION, YEAR		17.1° E, 1995	17.1° E, 1995
AIRPORT REFERENCE CODE (ARC)		B-I	B-I

LEGEND

ITEM	EXISTING	ULTIMATE
PROPERTY LINE		
BUILDING RESTRICTION LINE	B.R.L.	B.R.L.
AIRPORT REFERENCE POINT (A.R.P.)		
WIND CONE AND SEGMENTED CIRCLE		
CONTOURS		
ROADWAYS		
BUILDINGS		
ROTATING BEACON		
WATER		
FENCING		
RUNWAY THRESHOLD LIGHTS		

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FILE:
DATE:

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 7/15/02
By: Patricia O'Brien DATE: 7/15/02
FAA, AIRPORTS DIVISION
ALASKAN REGION, AAL-600

F.A.A. AIRSPACE REVIEW NUMBER: 97-AAL-069-NRA

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: STEPHEN M. RYAN, P.E. — DESIGN SECTION CHIEF
APPROVED: JOHN G WAHL, P.E. — PROJECT MANAGER

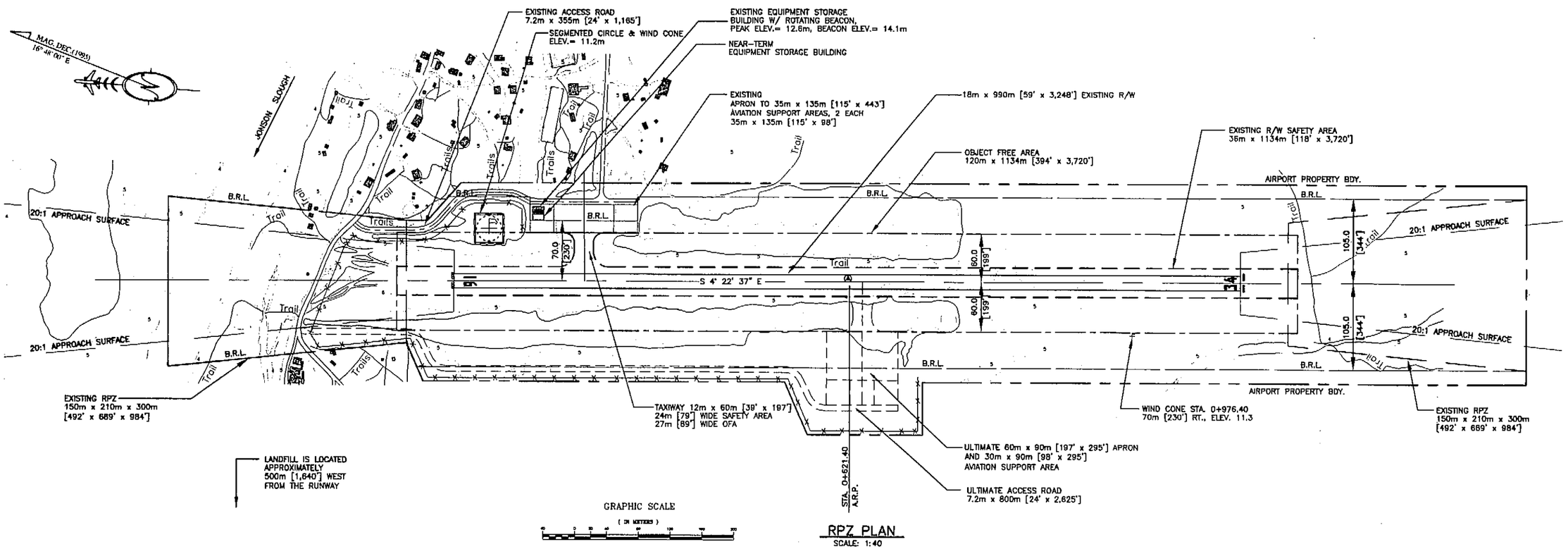
DATE 6/7/02
DESIGN
DRAWN
CHECKED

NAPAKIAK AIRPORT

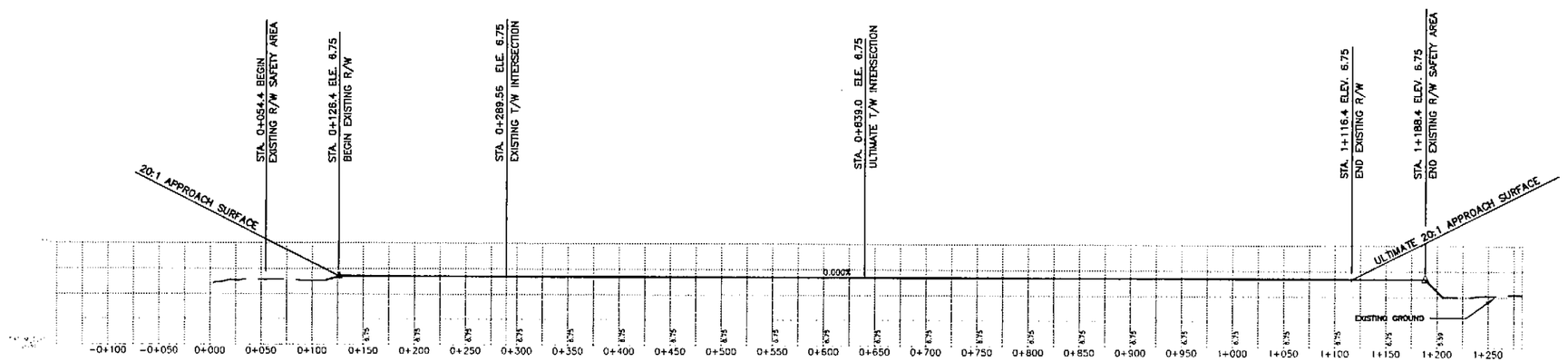
AIRPORT LAYOUT PLAN

VICINITY MAP AND DATA TABLES

SHEET 2 OF 7



RPZ PLAN
SCALE: 1:40



PROFILE
SCALE: VERT.= 1: 4
HORZ.= 1:40

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AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 7/15/02
By: Peter L Orie DATE: 7/15/02
FAA, AIRPORTS DIVISION
ALASKAN REGION, AAL-600

F.A.A. AIRSPACE REVIEW NUMBER: 97-AAL-069-NRA

FILE:
DATE:

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

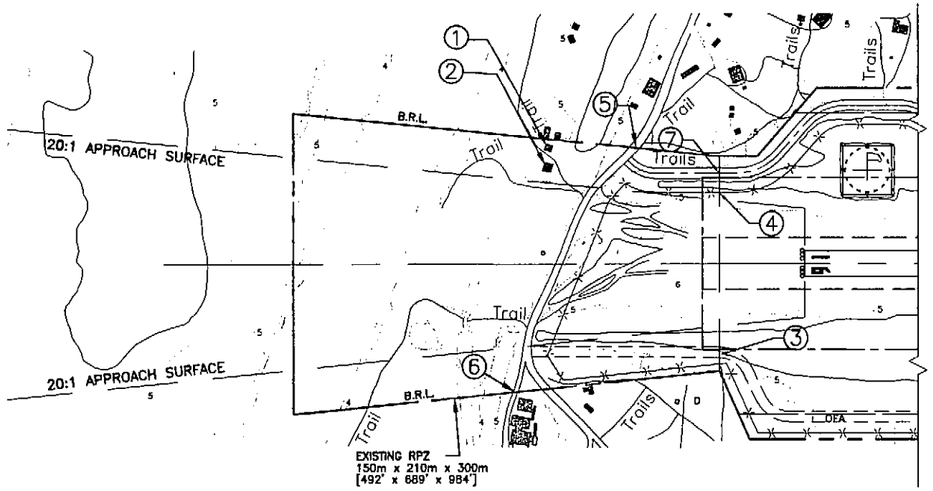
APPROVED: STEPHEN M. RYAN, P.E. — DESIGN SECTION CHIEF
APPROVED: JOHN C WAHL, P.E. — PROJECT MANAGER

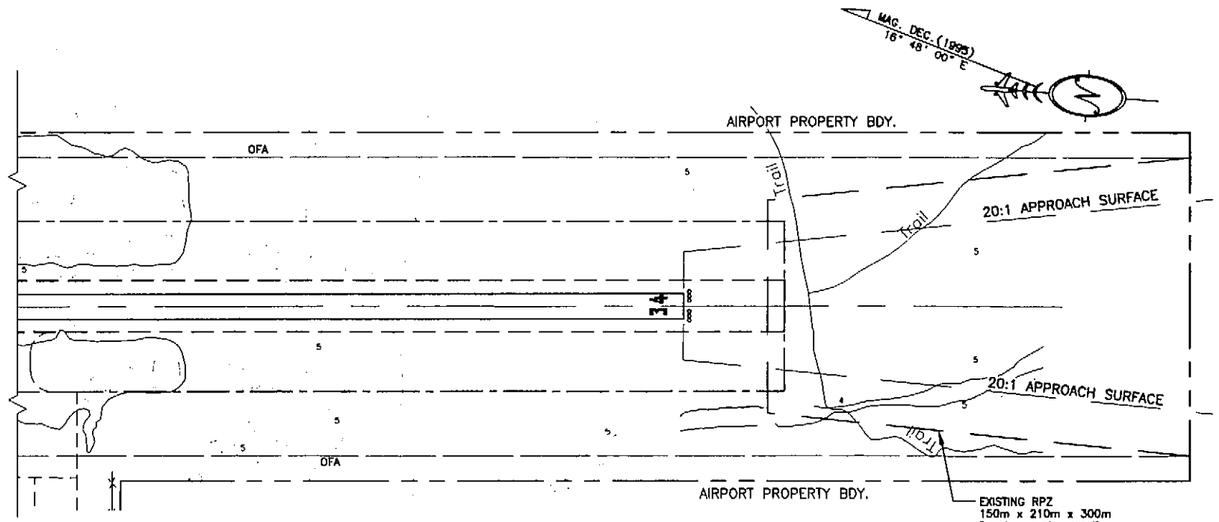
DATE 6/7/02
DESIGN
DRAWN MHT
CHECKED

NAPAKIAK AIRPORT

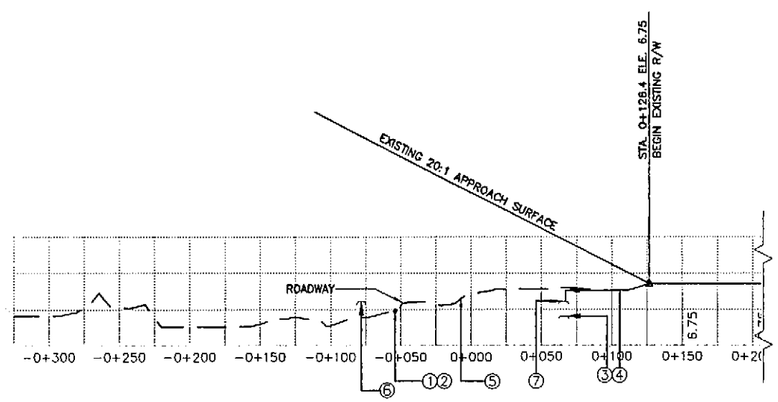
AIRPORT LAYOUT PLAN
RUNWAY 16/34
PLAN AND PROFILE

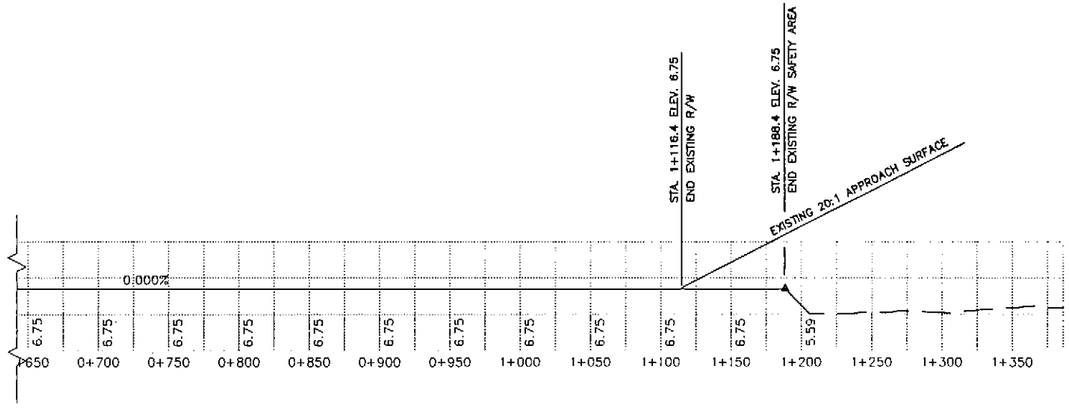
SHEET 3 OF 7





RPZ PLAN
SCALE: 1:200





GRAPHIC SCALE
(IN METERS)
50 0 25 50 100

RPZ PROFILE
SCALE: VERT.= 1: 20
HORZ.= 1:200

RPZ OBSTRUCTION TABLE

NO.	DESCRIPTION	OBJECT ELEVATION	APPROACH SURFACE ELEVATION	VERTICAL CLEARANCE	PENETRATION	DISPOSITION
①	BUILDING	4.8*	16.0	11.1	0	**
②	BUILDING	4.8*	16.0	11.1	0	**
③	FUTURE ROADWAY	4.5	9.75	5.25	0	N/A
④	FENCE	6.3	9.75	3.45	0	N/A
⑤	EXISTING ROADWAY	5.7	12.7	7.0	0	N/A
⑥	EXISTING ROADWAY	5.5	15.75	10.5	0	N/A
⑦	N-T ROADWAY	5.5	9.75	4.25	0	N/A

* ESTIMATED
** TO BE REMOVED IN THE NEAR-TERM

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FILE:
DATE:

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 7/15/02
By: Patricia Winn DATE: 7/15/02
FAA, AIRPORTS DIVISION
ALASKAN REGION, AAL-600
F.A.A. AIRSPACE REVIEW NUMBER: 97-AAL-069-NRA

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION
APPROVED: STEPHEN M. RYAN, P.E. DESIGN SECTION CHIEF
APPROVED: JOHN C WAHL, P.E. PROJECT MANAGER

DATE 6/7/02
DESIGN
DRAWN MHP
CHECKED KW

NAPAKIAK AIRPORT

AIRPORT LAYOUT PLAN
RUNWAY PROTECTION ZONES
PLAN AND PROFILE

SHEET 4 OF 7

ELEV.=113m (371')

Kuskokwim River

ELEV.=52m (171')

NAPAKIAK

HORIZONTAL SURFACE
ELEV.=52m (171')

ELEV.=52m (171')

TRANSITIONAL SURFACE

20:1 APPROACH SURFACE

20:1 APPROACH SURFACE

TRANSITIONAL SURFACE

ELEV.=52m (171')

1524m [5000'] R

HORIZONTAL SURFACE
ELEV.=52m (171')

20:1 CONICAL SURFACE

Kuskokwim River

ELEV.=52m (171')

Kuskokwim River

ELEV.=113m (371')

NOTES

1. AIRPORT AND RUNWAY ELEVATION IS 6.5m (21.33').

OBSTRUCTION DATA TABLE

NUMBER	PENETRATION DISTANCE (FEET [METERS])	DESCRIPTION
NONE	NONE	

LEGEND

WATER SURFACE

× Meters (Feet) SPOT ELEVATIONS

FILE:

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100 0 100 200
SCALE IN METERS

328 0 328 656
SCALE IN FEET

F.A.A. AIRSPACE REVIEW NUMBER:
97-AAL-069-NRA

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 7/15/02

By: [signature] DATE: 7/15/02
FAA, AIRPORTS DIVISION
ALASKAN REGION, AAL-600

BY	DATE	REVISIONS

DATE 6/5/02
DESIGN
DRAWN
CHECKED

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: STEPHEN M. RYAN, P.E. DESIGN SECTION CHIEF
APPROVED: JOHN G. WAHL, P.E. PROJECT MANAGER

NAPAKIAK AIRPORT

NAPAKIAK, ALASKA

AIRPORT LAYOUT PLAN

F.A.R. PART 77

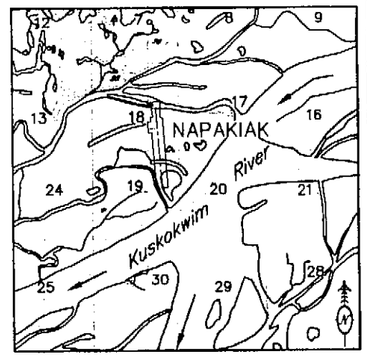
SHEET 5 OF 7

Line and Curve Tables

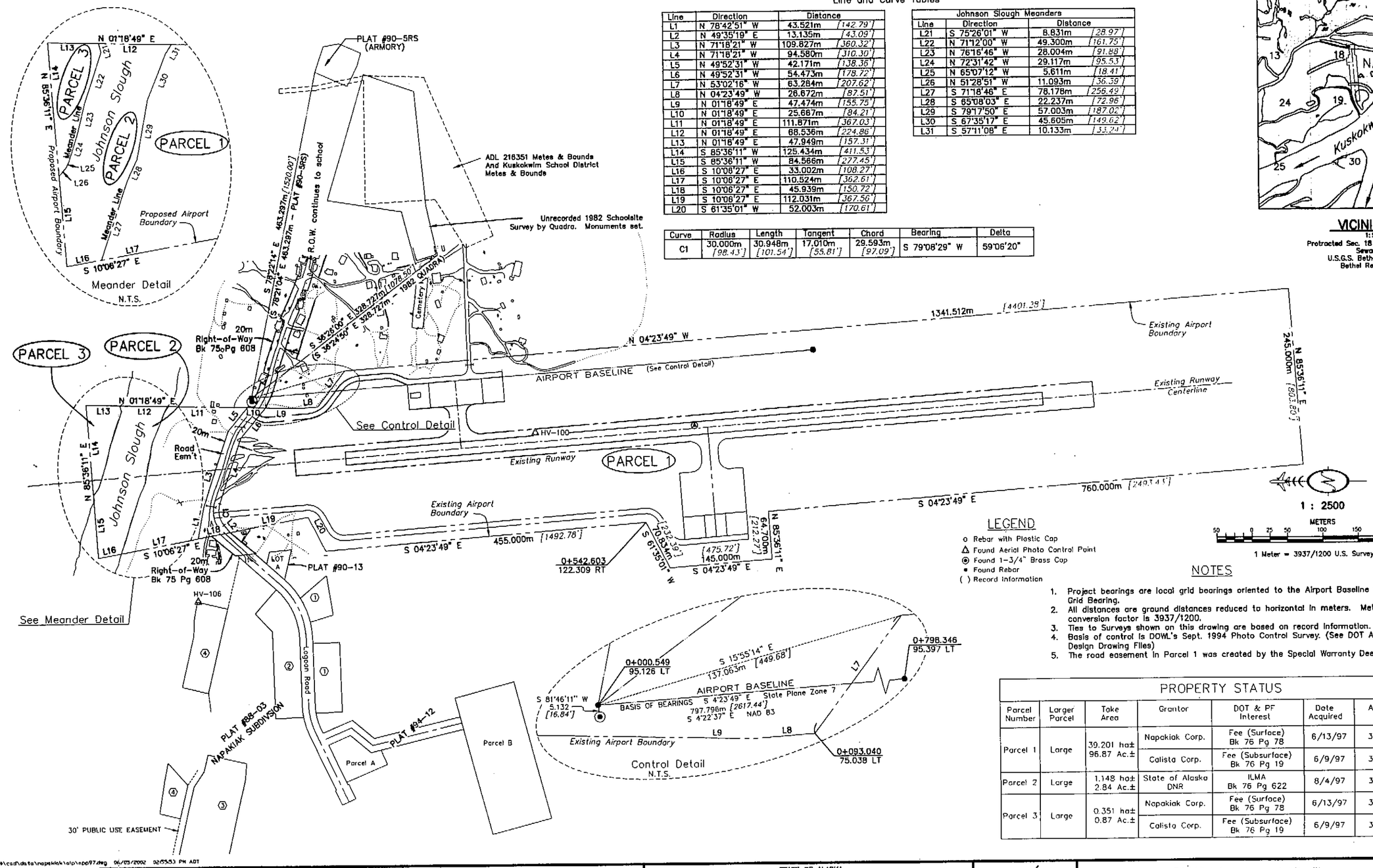
Line	Direction	Distance
L1	N 78°42'51" W	43.521m [142.79']
L2	N 49°35'19" E	13.135m [43.09']
L3	N 71°18'21" W	109.827m [360.32']
L4	N 71°18'21" W	94.580m [310.30']
L5	N 49°52'31" W	42.171m [138.36']
L6	N 49°52'31" W	54.473m [178.72']
L7	N 53°02'16" W	63.284m [207.62']
L8	N 04°23'49" W	26.672m [87.51']
L9	N 01°18'49" E	47.474m [155.75']
L10	N 01°18'49" E	25.667m [84.21']
L11	N 01°18'49" E	111.871m [367.03']
L12	N 01°18'49" E	68.536m [224.86']
L13	N 01°18'49" E	47.949m [157.31']
L14	S 85°36'11" W	125.434m [411.53']
L15	S 85°36'11" W	84.566m [277.45']
L16	S 10°06'27" E	33.002m [108.27']
L17	S 10°06'27" E	110.524m [362.61']
L18	S 10°06'27" E	45.939m [150.72']
L19	S 10°06'27" E	112.031m [367.56']
L20	S 61°35'01" W	52.003m [170.61']

Curve	Radius	Length	Tangent	Chord	Bearing	Delta
C1	30.000m [98.43']	30.948m [101.54']	17.010m [55.81']	29.593m [97.09']	S 79°08'29" W	59°06'20"

Johnson Slough Meanders		
Line	Direction	Distance
L21	S 75°26'01" W	8.831m [28.97']
L22	N 71°12'00" W	49.300m [161.75']
L23	N 76°16'46" W	28.004m [91.88']
L24	N 72°31'42" W	29.117m [95.53']
L25	N 65°07'12" W	5.611m [18.41']
L26	N 51°28'51" W	11.093m [36.39']
L27	S 71°18'46" E	78.178m [256.49']
L28	S 65°08'03" E	22.237m [72.96']
L29	S 79°17'50" E	57.003m [187.02']
L30	S 67°35'17" E	45.605m [149.62']
L31	S 57°11'08" E	10.133m [33.24']



VICINITY MAP
1:50,000
Protracted Sec. 18 & 19, T 7 N, R 72 W.
Seward Meridian
U.S.G.S. Bethel (C-8), ALASKA
Bethel Recording District



LEGEND

- o Rebar with Plastic Cap
- △ Found Aerial Photo Control Point
- ⊙ Found 1-3/4" Brass Cap
- • Found Rebar
- ( ) Record Information

NOTES

1. Project bearings are local grid bearings oriented to the Airport Baseline State Plane Grid Bearing.
2. All distances are ground distances reduced to horizontal in meters. Meter to foot conversion factor is 3937/1200.
3. Ties to Surveys shown on this drawing are based on record information.
4. Basis of control is DOWL's Sept. 1994 Photo Control Survey. (See DOT Aviation Design Drawing Files)
5. The road easement in Parcel 1 was created by the Special Warranty Deed Bk 76 Pg 78.

PROPERTY STATUS

Parcel Number	Larger Parcel	Take Area	Grantor	DOT & PF Interest	Date Acquired	Acquired Under A.I.P. No.
Parcel 1	Large	39.201 ha± 96.87 Ac.±	Napakiak Corp.	Fee (Surface) Bk 76 Pg 78	6/13/97	3-02-0188-01
			Calista Corp.	Fee (Subsurface) Bk 76 Pg 19	6/9/97	3-02-0188-01
Parcel 2	Large	1.148 ha± 2.84 Ac.±	State of Alaska DNR	ILMA Bk 76 Pg 622	8/4/97	3-02-0188-01
Parcel 3	Large	0.351 ha± 0.87 Ac.±	Napakiak Corp.	Fee (Surface) Bk 76 Pg 78	6/13/97	3-02-0188-01
			Calista Corp.	Fee (Subsurface) Bk 76 Pg 19	6/9/97	3-02-0188-01

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AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO AIP APPROVAL LETTER DATED 7/15/02
By: [signature] DATE: 7/15/02
FAA, AIRPORTS DIVISION
ALASKAN REGION, AAL-600
F.A.A. AIRSPACE REVIEW NUMBER: 97-AAL-069-NRA

FILE:
DATE:

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION
APPROVED: [signature] for STEPHEN M. RYAN, P.E. DESIGN SECTION CHIEF
APPROVED: [signature] JOHN G WAHL, P.E. PROJECT MANAGER

DATE 6/7/02
DESIGN
DRAWN
CHECKED

NAPAKIAK AIRPORT
AIRPORT LAYOUT PLAN
PRORERTY PLAN
PRORERTY PLAN SHEET 1 OF 1

SHEET 6 OF 7

NAPAKIAK AIRPORT

AIRPORT LAYOUT PLAN NARRATIVE REPORT

A. Purpose

This Airport Layout Plan Narrative Report is included with the Airport Layout Plan (ALP) for the Napakiak Airport in accordance with Federal Aviation Administration (FAA) Airport Design Advisory Circular 150/5300-13, Appendix 7. The design of this project is being completed in SI (metric) units, and all measurements and units are in accordance with ASTM E 380-93. The rationale for improvements on the Napakiak Airport are outlined in this report.

B. Introduction

The Napakiak Airport is located along the Kuskokwim River, 16 kilometers (10 miles) southwest of Bethel, Alaska. Transportation to the community is accomplished by air and seasonal river access from Bethel. Air transport serves as the sole year round mode of transportation to Napakiak.

The community had a permanent population of approximately 318 persons in 1990 and 262 in 1980. U.S. Bureau of Census records indicate a 2% population growth rate for the period from 1980 to 1990. The same growth rate is used in this report to determine future projections and forecasts.

C. Airport Usage and Forecasts

The Alaska Aviation System Plan (AASP) has designated the Napakiak Airport as a community class airport. A community class airport is designated as the primary access to a small rural community of at least 25 permanent year round residents, without reliable alternate year round access.

Local air taxi operators based in Bethel are the source of all aircraft operations to the community. For the 1993 calendar year, air taxi operators reported a total of 2,132 enplanements at the Napakiak Airport. There is no record of any itinerant operations. Arctic Circle Air, Hageland Aviation, Mark Air Express, Larry's Flying Service, Arctic Transportation Services, and Yute Air all have daily scheduled flights from Bethel to Napakiak. Charter flights are available from ERA Aviation and Kusko Air. The number of scheduled and charter flights varies from day to day depending on demand. Results of a recent survey of Bethel based air taxi operators revealed there are twenty-one (21) scheduled flights and an average of two (2) charter flights per week to the community of Napakiak. At this rate of twenty-three (23) flights per week and two (2) operations per flight, a total of 2,400 operations are performed per year at the current time.

A total of 1,500 aircraft operations were reported for the 12 month period ending June 21, 1993 on the Airport Master Record (FAA Form 5010). It is presumed that the data on this form is incorrect due to under reporting of flights to the community. Current estimates indicate 2,300 scheduled and 100 nonscheduled (charter) aircraft operations for the calendar year 1995. Using a growth rate of 2% per year (1.02 n where n equals the number of years), 2,925 annual operations are estimated by the year 2005. Table One lists a forecast of future aircraft operations based on current conditions.

TABLE ONE
FORECAST OF FUTURE OPERATIONS

ITEM	0-5 yrs	6-10 yrs	11-20 yr
Total Annual Operations	2,650	2,925	3,565
Annual Itinerant Operations (all aircraft)	*	*	*
Annual Enplanements	1,725	1,900	2,560
Annual Instrument Approaches	0	0	0
Annual Operations (current critical aircraft)	*	*	*
Annual Operations (future critical aircraft)	*	*	*
Annual Scheduled Operations	2,540	2,800	3,420
Annual Non-scheduled Operations	110	120	150

* No data available

There are no permanently based aircraft in Napakiak at the current time and none are expected in the near-term future. The airport is currently served by small single engine aircraft similar to the Cessna 207. As upgrades are completed to the runway, light-twin aircraft similar to the Piper Navajo and Cessna 402 are expected to become the primary aircraft serving the community. As other local community airports become upgraded to Category B-1, small twin-engine aircraft are expected to become the primary aircraft serving the area.

D. Stage Development

Development of the Napakiak Airport will be accomplished in phases of near-term (0-5 years), mid-term (6-10 years), and long-term (11-20 years). The most recent project, A.I.P. No. 3-02-188-0198, extended the Runway to the south for a distance of 350 meters (1,148 feet). The runway safety area was extended beyond the runway ends for a distance of 72 meters (240 feet). Completion of this work upgraded the airport to the standards for Airport Reference Code B-1. Additional development work included installation of runway lighting and construction of an equipment storage building. A new motor grader will be acquired for snow removal. The proposed stage development is as follows:

Near-Term (0-5 years)

Near-term development will construct a 7.3 meter by 14 meter (24 foot by 46 foot) heated equipment storage building to supplement the existing unheated building. The estimated cost for the near-term development is $500,000.

Mid-Term (6-10 years)

Mid-term development will consist of grading and maintaining the runway and runway safety area, taxi way and apron. Installation of a Precision Approach Path Indicator (PAPI) system by the FAA may be a part of mid-term development. The approximate State cost for the mid-term development is $500,000.

Long-Term (11-20 years)

Long-term development will consist of resurfacing and regrading the gravel runway, taxiway, and apron, and relocating the apron on the west side of the runway. The relocation of the apron will occur after the Napakiak residents move their village, to the west, as planned. The estimated cost for the long-term development is $2,000,000.

E. Design Rationale

A higher percentage of light-twin aircraft is expected be used commercially in the southwest region of Alaska. Napakiak Airport is designed to meet the needs for this type of aircraft. The airport was recently upgraded to meet the standards for Airport Reference Code B-1.

1. Airport Reference Code (ARC)

Napakiak Airport has an Airport Reference Code of B-1.

2. Wind Coverage

There is no wind data available for the Napakiak area. The Napakiak wind coverage analysis was based on Bethel wind data for the period from 1991 to 1996. The Bethel Airport wind data was used because there is no data available for Napakiak and the topography is relatively flat between Napakiak and Bethel (16 kilometers to the northeast).

Using the Bethel data on an 18 meter (60 foot) wide runway (B-1) at the existing orientation yields a 81.35% coverage for cross winds less than 10.5 knots. This does not meet the recommended 95% cross wind coverage.

In cases where one runway does not afford 95% wind coverage, a cross wind runway may be considered to give the pilot a choice of alignments. A cross wind runway would impact 3.6 hectares (8.8 acres) of wetlands and cost approximately $ 3,000,000 to design and construct. It is the current policy of the ADOT&PF to provide rural Alaskan communities with one runway constructed to the dimensions recommended in the FAA and the AASP standards. The proposed airport meets all of the criteria, except wind coverage, set forth by the FAA and AASP for the safety of the type of users expected to operate at the Napakiak Airport.

3. Runway

Runway 16/34 has a runway surface 18 meters (60 feet) wide and 990 meters (3,248 feet) in length. Runway construction has a 230 mm (9 inch) gravel surface. The safety area dimensions are 36 meters (120 feet) wide and 1,134 meters (3,720 feet) long and extend 72 meters (240 feet) beyond each runway end. Medium intensity lighting are installed on both the runway and apron taxiway.

4. Taxiway

The existing taxiway is located 91 meters (300 feet) north of the runway midpoint and is an exit taxiway to the existing apron. The existing taxiway is 12 meters (39 feet) wide by 51 meters (167 feet) long with lighting. The taxiway safety area width is 24 meters (79 feet). The dimensions are standard for Airplane Design Group (ADG) II. The larger taxiway size is recommended to help provide a higher safety margin for small aircraft during high wind and icy conditions which are common in this region.

Long-term taxiway development will provide a new lighted 12 meters (39 feet) wide by 51 meters (167 feet) long taxiway to the long-term apron. The taxiway safety area width will be 24 meters (78 feet).

5. Apron

The existing apron is 75 meters by 30 meters (246 feet by 98 feet) with two 30 meter by 30 meter (98 foot by 98 foot) lots. The front edge of the parking area is 60 meters (197 feet) from the runway centerline to meet ADG I standards. The apron area (2,250 sq.m.) will be half the standard size apron. Residential housing to the east of the existing apron prohibits developing a full size apron. Two aircraft tie downs will be provided.

Currently, both the apron and 80% of the community is located on the east side of the airport. The community plans to relocate on the west side of the runway in the future due to erosion from the Kuskokwim River. After Napakiak is relocated, long-term development will construct a new 60 meter (197 foot) by 90 meter (295 foot) apron with three 30 meter (98 foot) by 30 meter (98 foot) aircraft support area lots on the west side of the runway. Construction of the long-term apron will allow the development of a full size apron with easy access for the community. The community does not support near-term relocation of the apron at this time.

6. Access Road

There are two existing access roads. One goes directly East to connect to the village road system. A second road runs North to a public road at the north end of the runway. This road connects the East and West sections of the village. Fencing is installed around the north end of the runway and down part of the west side of the runway to prevent vehicles and pedestrians from crossing the runway.

Access to the new long-term apron will be provided by a new access road 7.2 meters (24 feet) wide and 800 meters (2,625 feet) long connecting to a roadway north of the runway.

Napakiak Airport Design Standards
Runway 16/34

ITEM	EXISTING		STANDARD (B-1)		FUTURE	
	SI	FEET	SI	FEET	SI	FEET
Runway Length	990	3,248*	990	3,248*	990	3,248
Runway Width	18	60	18	60	18	60
Runway Safety Area Width	36	120	36	120	36	120
Runway Safety Area LengthBeyond Runway Ends	72	240	72	240	72	240
Runway OFA Width	120	400	120	400	120	400
Taxiway Width	7.5	25	7.5	25	12	40
Taxiway Safety Area Width	15	49	15	49	24	80
Taxiway OFA Width	27	89	27	89	27	89
Aircraft Parking AreaDistance from Runway C/L	60	200	60	200	60	200
RPZ Length	300	1,000	300	1,000	300	1,000
RPZ Inner Width	150	500	150	500	150	500
RPZ Outer Width	210	700	210	700	210	700
Approach Slope Angle	20:01	20:01	20:01	20:01	20:01	20:01

*100% of small aircraft with less than 10 passenger seats.

F. Property Status

Napakiak Airport is currently situated on approximately 43.27 hectares (107 acres) of property for This land gives the State all lands and easements necessary to operate and maintain the airport improvements.

G. Napakiak Landfill Site

The landfill for the community of Napakiak is located approximately 500 meters (1,640 feet) west of the runway. The landfill site is unable to meet the minimum distance requirements from the airport since moving to a new site is not economically or environmentally warranted. The Alaska Department of Environmental Conservation does not have any plans to relocate the site at this time. In the future, any new landfill should be sighted a minimum of 1525m (5,000 ft) from the airport.

H. Community Involvement

The residents of the village of Napakiak and neighboring villages have been informed of the planned development by the Alaska Department of Transportation & Public Facilities (DOT&PF) Environmental Section. The completion of this project requires an Environmental Assessment which provides opportunities for community input. Letters from residents of the community are on file at DOT, Central Region offices.

I. Non Standard Conditions

1. Design Deviation

The existing Runway 16/34 meets the standards for a ADG B-I. The width of taxiway and taxiway safety area are 12 meters (39 feet) and 24 meters (79 feet) respectively to provide for increased safety of small aircraft during high wind and icy conditions.

2. Wind Coverage

The Napakiak Airport does not meet the standard of 95% wind coverage as discussed in subsection E.2. Wind Coverage.

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FILE:
DATE:

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 7/15/02
By: Pat Oie DATE: 7/15/02
FAA, AIRPORTS DIVISION
ALASKAN REGION, AAL-600

F.A.A. AIRSPACE REVIEW NUMBER: 97-AAL-069-NRA

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: STEPHEN M. RYAN, P.E. — DESIGN SECTION CHIEF
APPROVED: JOHN G WAHL, P.E. — PROJECT MANAGER

DATE 6/7/02
DESIGN
DRAWN
CHECKED

NAPAKIAK AIRPORT

AIRPORT LAYOUT PLAN
NARRATIVE REPORT

SHEET 7 OF 7